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AUTHOR Kantor, Sherrie L.
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ABSTRACT

A statewide survey was conducted to document and analyze the variety of direct services to businesses and industry provided by Colorado's 15 community colleges. At each college, the president and the individual responsible for direct instructional services to business were surveyed using a personal interview format in addition to a survey questionnaire. The findings, based on returns from 14 colleges, include the following: (1) Colorado community colleges customized their direct services to business over 50% of the time, compared to national figures indicating that over 50% of business services by community colleges were modified or off-the-shelf versions of regular course offerings; (2) 50.6% of the courses offered focused on job-specific vocational skills; (3) the highest volume of instructional services were concentrated in eight colleges where economic conditions were strong and the population size was large, whereas noninstructional services were spread evenly among the community colleges around the state; (4) more employers purchased noninstructional services, such as customized small business services, than instructional services; and (5) state economic initiatives accounted for 17% of the employees receiving customized training. The study report includes a list of recommendations, reflections upon the future missions of community colleges, and statistical data on study findings. (JSP)

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DIRECT SERVICES TO BUSINESS

DELIVERED BY

COLORADO COMMUNITY COLLEGES

A REPORT PREPARED
FOR THE COLORADO COMMUNITY COLLEGE AND
OCCUPATIONAL EDUCATION SYSTEM

BY

SHERRIE L. KANTOR, Ph. D.
DEAN, COMMUNITY SERVICES
COMMUNITY COLLEGE OF AURORA

OCTOBER 1991

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PARTICIPANTS IN DIRECT SERVICE TO BUSINESS STUDY

Aims Community College
Dr. George Conger, President
Arietta Weidman, Dean of Continuing Education

Arapahoe Community College
Dr. James Weber, President
Dr. Wayne Henry, Dean of Community Services

Colorado Mountain College
Dennis Mayer, President
Ross Thomas, Dean of Occupational Education

Colorado Northwestern Community College
Dr. Aubrey Holderness, President
Chris Brubaker, Dean of Community Educational Services

Community College of Aurora
Dr. Larry Carter, President
Dr. Sherrie Kantor, Dean of Community Services

Community College of Denver
Dr. Byron McClenney, President
Dr.Cecelia Cervantes, Dean of Community Services

Front Range Community College
Dr. Cary Israel, President *
Dave Braman, Dean of Continuing Education and Contract Services

Lamar Community College
Dr. Marvin Lane, President
Ron Vorderstrasse,Dean of Vocational Education

Morgan Community College
Dr. Harold Deselms, President**
Maggie Goodwin-Dahl, Dean of Continuing Education and Community Development

Otero Junior College
Dr. William McDivitt, President
Jim Litle, Assistant Dean of Instruction

Pikes Peak Community College
Dr. Marijane Paulsen, President
Patty Traynor,Director of Industrial and Economic Development Services

Pueblo Community College
Dr. Tony Zeiss, President
Dr. Jim Arnold, Dean of Contract Training

Red Rocks Community College
Dorothy Horrell, President
Shelli Bischoff, Executive Director of Red Rocks Institute

Trinidad State Junior College
Dr. Tom Sullivan, President
Mary Ann Carlson, Director of Continuing Education

* President at time of study

ADVISORS IN STUDY:

Dr. Jerome Wartgow
President, Colorado Community College and Occupational Education System

Bill Newbloom
Director of Business and Industrial Training, Colorado Community College and Occupational Education System

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THE STATE OF DIRECT SERVICES TO BUSINESS IN COLORADO COMMUNITY COLLEGES

Introduction

The economic and educational future of the nation and the state of Colorado is growing more intertwined. The labor force is experiencing dramatic changes. Not only is the pool shrinking, but the skills of the people in the labor pool are lacking. National and state competitiveness are threatened by the lack of workers with the educational skills and abilities to meet the changing demands of the 1990s workplace. Higher education is exploring many avenues to become a partner in economic development.

Community colleges in particular have responded by expanding their roles beyond the traditional role of education and training for individuals. They have entered into partnerships with businesses to customize training for several components of their workforce and sometimes for their entire workforce. Some colleges are screening and assessing potential employees for new businesses locating to the state. Others are assessing their local businesses themselves and then recommending short and long range training plans. Still other colleges work closely with economic development agencies to recruit and attract businesses to their locale.

The Problem

As the mission expands to bring college services directly to the employers and takes on the role of partner in economic development, it causes problems and opportunities the colleges have never faced. In the past, colleges concentrated on the individual student, and then the businesses hired the individual. The paradigm is shifting; while community colleges still focus on individuals, their new partnerships now demand that they look beyond individual students and help the individual businesses and industries in their locale with a variety of economic development and training initiatives that will help them remain competitive. Colleges are designing curriculums, adapting administrative structures and entering into economic activities they have never entered into before. Some colleges are adapting better than others. Variables such as faculty acceptance, top leadership support and local economy contribute to the variation among schools in their delivery and their success.

These activities were recently chronicled and analyzed in a national study conducted by Dr. James Palmer, Director of Community College Studies at George Mason University (June 1990). He discovered four common themes when he examined this phenomenon from a national perspective. They are summarized into four categories: 1) diversity of programs and services, 2) concentration of programs and services, 3) expansion of colleges' community services role into economic development and 4) balancing educational demands of business with academic traditions. These national findings were compared with Colorado's initiatives.

As Colorado's business, college, and state leaders and policy makers venture further into economic development partnerships to make decisions about the variety and extent of direct services to business, the information found in this study can assist their efforts.

The Purpose

The purpose of this study was to chronicle and analyze the variety and extent of direct services to businesses and industry provided by Colorado's community colleges. It was intended that the much-needed information will give college educators, state administrators, legislators, economic developers and large and small businesses a more comprehensive view of direct college services to business and industry provided by Colorado's community colleges.

Research Design

Survey research, a type of empirical research methodology, was employed by this study because it allowed the researcher to discover what was taking place and then to analyze it. The key individual responsible for direct services to business along with the president was surveyed using a personal interview format.

Five constituent groups who would most benefit from the survey were identified. An "experience survey" (in-depth interview) was conducted with five individuals representing those groups. The same protocol questions were used to further discover what was taking place and how best to obtain that information. A preliminary survey tool was then constructed. This preliminary survey tool was then pilot tested by the five representatives and others. Upon revision, the final survey was constructed.

A letter went out to the college professional responsible for direct services to business at each Colorado community college. The letter requested that information be collected and recorded on the survey form. Any items not completed or understood were completed when the administrator in charge of direct services at each college received a personal interview at the time the survey was collected. A separate visit to the president using similar survey questions was also conducted. Results were tabulated using accepted statistical practices. Fifteen community colleges were invited to participate in the process, and 14 chose to do so.

Each Colorado community college's direct services to business was chronicled, summarized and then analyzed in relationship to themselves and the other state community colleges. The colleges were promised the results would be summaritive and the identity of individual colleges would remain confidential. In addition they were compared to the four national themes discovered in the Palmer Study. These themes were the basis for the research propositions of the study. The results are summaritive, and individual college results remain confidential.

Research Propositions

1. It was proposed that while some diverse instructional services are customized at each of the local community colleges, over 50% of the instructional services were either modifications or "off-the-shelf" versions of the "regular" courses offered by the college.

2. It was proposed that a large amount of services to business and industry was concentrated in those Colorado community colleges where institutional effort and economic conditions were strongest.

3. It was proposed that the Colorado community colleges have expanded their missions to include non-instructional services that promote economic development such as grantsmanship, assessment services and counseling to small businesses, and that they play a catalyst role as partners and/or participants with local economic development groups such as their local Chamber of Commerce.

4. It was proposed that colleges were still maintaining control of academic decisions as they attempted to balance the tensions between academic traditions and the demands of business and industry.

RESULTS: DIVERSITY

Colorado Community Colleges Customize More

Colorado community colleges were found to customize their direct instructional and noninstructional services to business 50% or more of the time. This was contrary to national and state findings in the literature (Palmer 1990, Wilson, 1986) that reported over 50% of the customized services are either modified or off-the-shelf versions of the regular courses offered by the college.

Large Percentage of Job-specific Vocational Skills Accounts for Diversity

Job-specific vocational skills accounted for the largest percentage of courses (50.6%). See table 1. Called by one president the "broad tech" skills, they were the reason for the great diversity of offerings and high degree of customization.

Essential work skills accounted for 30% of the courses, with basic academic skills accounting for 8.4%. "Other" courses, like health-related subjects not fitting any of the previous categories, accounted for 11%. See table 1.

Noninstructional Services Serve the Most Employers

Counseling to small businesses accounted for most services purchased by employers with grantsmanship (like Colorado FIRST), and company assessments the next highest number of services. See table 2.

Presidents Want to See Expansion of Services

Six presidents expressed their desire to expand the college role in noninstructional direct services. Some examples cited that were already underway were their child care referral services or their minority business center.

Diverse Patterns Found in Decisions about Credit or Noncredit for Customized Courses

Colleges were evenly split in their tendency to offer college credit. Half offered credit 50% or more of the time. Course content was a determining factor in worthiness of credit. The diverse patterns reflected the colleges' diverse clients (and those clients' desire or lack of desire for college credit) as much as the pattern reflected desires of the college.

Diverse Pattern for Location of Customized Instruction

Seven of the 13 colleges reported 50% or more of the training took place on campus. Six colleges reported training took place at the business 50% or more of the time.

Colleges were Found to be Matching Diverse Community Needs

As expected, Colorado's diverse economic base was reflected in the way colleges reported the size and type of businesses they served.

Presidential Response to Match of Community Needs

Interviews with the presidents revealed that many felt their programs were not yet as responsive, nor as diverse, as they could be. One president suggested the need to work more closely in high tech and biomedical fields, and another in the retention of smaller businesses. One explained the match was as close as the college could afford to match.

RESULTS: CONCENTRATION

Direct Services were not Concentrated at Just a Few Colleges.

Eight of the 14 community colleges reported considerable activity. These colleges tended to be near the most populated areas. While geography and local economic conditions may have been a factor in concentration, leadership was not. Leadership as measured by participation in economic activities and comments in the interviews was found to be strong in all 14 community colleges.

Customized Job-Specific Instruction Enrolls the Most Employees

Customized job-specific vocational skill courses were delivered the most often and enrolled the most employees. See figures 2, 3, and 4.

Essential Work Skill and Academic Skills Courses Concentrate in Several Colleges

Academic skills courses tended to locate in three colleges that did not show high enrollment in vocational skill courses. Another college led all the others in essential work skill offerings (131). Another college achieved greater enrollment (796 students) with fewer courses (52). See figures 2 and 3.

Noninstructional Services Used Most by Employers

More employers purchased noninstructional services (1,632) than instructional services (472) when customized small business services (1,181) were factored in. See table 2.

Assessment Services Concentrated

Assessment of employees (like basis skills) and assessment of business (like organizational audits) tended to concentrate in two schools. They accounted for 14 of the 20 employers and 640 of the 912 employees for whom pre-employment assessment was delivered. See table 2.

Projects Concentrate in $5,000 or Less Category

Half the colleges reported that 60% or more of the customized programs they delivered cost the company $5,000 or less. See table 3.

Repeat Business 89.1%

Most colleges reported 50% or more of direct services delivered in 1989 came from repeat business. The mean was 89.1%.

Business Growth 189.9%

The mean increase in customized instructional and noninstructional services business among colleges in 1989-90 (new and repeat clients) was 189.9%. Only one college reported a decrease.

Concentration in the Manufacturing Sector

Seven of the nine colleges concentrated 40% or more of their business in the manufacturing sector. See table 4.

Concentration in Smaller Sized Businesses

There was a concentration of service to businesses in those companies with 100-500 employees. See table 5.

Financial Support Not a Factor in Concentration

The majority of colleges received some general fund support for direct services operations. Often this was for the administrator's salary who often had multiple functions. Start-up operations also received support from the college besides the funds the unit itself generated.

Colorado FIRST and funds from other grants represented less than 20% of the funding of the operations in those colleges that received the funding. Contracts with business for direct services generated 60% or more of the funding in at least half the colleges. See table 6.

Strong Presidential Support Correlates to Fiscal Support

Support for the direct services programs from the presidents was strong. The commitment to this economic development program and mission was strong enough to subsidize it when economic conditions were not favorable or the operation was new. This was consistent with a national study where revenue generation was not found to be the major reason community colleges entered the direct services business. In this study, presidents suggested they would support the program financially even when it could not be self-supporting (Warford, 1989).

Centralized Management Model the Most Common

Most colleges had a centralized management structure—a unit responsible for the coordination and delivery of direct services that reported to the highest levels of the college. Only one of the eight most active colleges had a decentralized model.

Experience Not a Factor in Concentration

Very experienced and less experienced managers were represented among the most active colleges.

Direct Services to Business Programs in Colorado are New

The average number of years the direct service operations have been in existence in Colorado is 4.2 years.

Concentration on Marketing a Factor

The colleges who spent 20% or more of their time on marketing were among the most successful when volume and repeat business was measured.

RESULTS: EXPANSION OF COMMUNITY SERVICE ROLE

Community College Missions Expanding to Include Economic Development

Findings showed Colorado community colleges are definitely expanding their missions to include a variety of economic development activities and roles. Yet, they have not expanded their mission so broadly that the legitimacy could be questioned. The programs were found to represent an expansion of the existing mission—to direct educational resources toward the economic, social, cultural and community needs of the geographical area the colleges serve.

Participation on Economic Development Team Rated High

Serving on the economic development planning teams and/or Chambers of Commerce rated the highest in importance and participation. See table 7.

Development of educational programs and seminars for business along with the small business counseling received the next highest rating for importance and participation among the 14 community colleges. See table 7.

Activities that Stretch the College's Mission Rated Lowest

The lowest ratings came for activities like business incubators that are seen by academicians as least central to the college's mission. See table 7.

College's Role in Economic Development Viewed as Protean by Presidents

While the administrators in charge most often saw their role as a partner, when interviewed, the presidents saw their college's role as much more situational. They described it as leader, catalyst, prime mover and liaison, depending on the situation.

Mismatches in Importance and Activity

In several instances, colleges rated an activity high in importance (like counseling small business-86%) but rated the participation in that activity lower (74%). See table 7.

RESULTS: COLORADO FIRST PROGRAM - A STATE ECONOMIC DEVELOPMENT INITIATIVE

Colorado FIRST Accounts for 17% of All Employees Who Received Customized Training

Colorado FIRST and Existing Industry programs accounted for 17% of the employees receiving customized training in Colorado in 1989-90. See table 8.

7.8% of Employers Participate in Colorado FIRST

Employers who purchased customized training with Colorado FIRST funding represented 7.8% of all employers who purchased customized training in 1989-90. See table 8.

2% of Employers Participate in Existing Industry Program

Existing Industry funding totaled 2% of employers purchasing customized training and 5.2% of the employees receiving customized training in the state in 1989-90. See table 8.

Training Partnerships Forged Outlast Funding

61% of Colorado First employers who were new to Colorado continued the training partnerships by purchasing more business the next year (1990-91).

90% of the companies who received Existing Industry training dollars continued the training relationships with the college after the grant was over. See table 9.

Colleges Remain in Control of Design and Execution of Customized Programs

While the companies participated from time to time in the design and execution of the curriculum of Colorado First and Existing Industry programs, the largest percent of training was designed, delivered and conducted by the college. See table 9.

Constraints of Programs

Lack of adequate funding to accommodate more businesses and inadequate funds to cover the administrative costs were the constraints most often described.

Opportunities Provided

Short and long term relationships with the college were the benefits cited most often.

In addition, the exposure to new technology and trends assisted the colleges in keeping the more traditional programs up to date. In several cases, examples were cited (like training at IBM) where new technology and information changed the traditional on-campus academic program.

RESULTS: COLLEGE'S ADAPTATIONS TO BALANCING EDUCATIONAL DEMANDS WITH ACADEMIC TRADITIONS

Colorado Community Colleges in Control of the Academic Process

Colorado community colleges are maintaining control of their academic process while delivering training that meets the educational demands of business. They accomplish this by the way they develop the customized curriculum, assign its faculty, determine course content, college credit and evaluate the programs. In addition, the structure and fiscal support developed contributes to the ability to maintain the academic traditions. The specifics follow here:

Curriculum Developed by Colleges

In most cases, customized curriculum was reported to be developed exclusively (80% of the time) by the college. To a much smaller extent, the employers had some role in its development, and when they did, it was in collaboration with the college. See table 10.

College Credit Determined Jointly by College Departments

In the majority of colleges (12), the college credit decision was a joint one shared by the direct service department and the regular instructional personnel who were content specialists. A curriculum committee was seldom used. Businesses never determined college credit; they merely stated whether or not they desired that it be awarded for the instruction they purchased.

Regularly Employed Faculty Teach a Large Proportion of Customized Classes

The full-time faculty taught an average of 43% of the customized classes. Regularly employed part-time instructors taught an average of 25% of the customized classes. Together they represent 68%, and more than two thirds of the instructors hired to conduct customized training. These instructors represent those who also teach in the traditional part of the institution. The high proportion of teaching in direct service by the traditional part of the college represents another way the college maintains control of the product. Consultants and company employees were used more infrequently. See table 11.

Evaluation Techniques Vary

No one method of evaluation predominated. Visitations, phone, and personal contact with employers were all methods that were reported along with written evaluations. One president felt that the added pressures of delivering training to employers and their employees made the evaluation process more rigorous and vigorous than the conventional evaluation procedures used by the more traditional side of the college. Other presidents felt this process could be improved in both the traditional and conventional programs.

Structure: Direct Services Housed in Community Services/Continuing Education Units

The direct services unit was most frequently housed in the department that had the responsibility for community service and continuing education.

Leadership: Deans Head Most Units

Most of the units (10 of 14) were led by a dean who most often reported to the president.

Direct Services Leaders Very Experienced

The average number of years of management experience by direct services leaders was 13.5 years. Often the experience in higher education included innovative or experimental programs that required risk taking and/or entrepreneurship.

Project Management and Instructional Design Top Priority

The most time reported on task was spent on project management (40-60%) and then instructional design (20% or more). Five colleges spent 20-30% of their time on marketing.

Pricing Policies Among Colleges Similar

There was a consistency in how community colleges reported they priced the direct service. The majority considered costs of teaching, instructional design, assessment, materials and supplies. The next most considered costs were fringe benefits, clerical and administrative support, and travel. The costs considered least (3 colleges) were for the indirect costs like phone, space and equipment leases.

Support of Direct Services by Rest of College

Full-time faculty were rated as supportive and very supportive by direct service program administrators. Presidents were rated as very supportive. The instructional deans and vice presidents were rated as helpful. The maintenance and business offices were the only areas where support was not as high as the others.

Presidents Cite Roadblocks in Acceptance of Direct Services Function

Several presidents expressed concern about resistance to the direct services mission of the college (mostly by full-time faculty or middle management). They attributed it to those employees who feel threatened by new initiatives. All expressed the importance, albeit, with difficulties, of integrating the direct services mission into their institutions. Several expressed how it was difficult to get the rest of the college to "catch the vision" of the importance of the economic development mission carried out by direct service programs.

Direct Services Mission Valued but not Explicit in all Mission Statements or Strategic Plans

The mission of direct services was highly valued by all the presidents. Their personal participation was evident, especially in economic development activities. Yet, it was not explicit in five of the colleges' mission statements, nor in four of the colleges' strategic plans.

CONCLUSIONS: DIVERSITY

Instructional Services

Colorado community colleges are accommodating the diverse needs of the businesses they are serving by customizing the instructional and noninstructional services more than 50% of the time, which is more frequently than the national averages reported (Palmer 1990). This may be attributed to the large proportion of vocational skills courses delivered for manufacturing firms as well as the counseling conducted for small businesses. Both require greater customization to meet employer needs.

Noninstructional Services

While instructional services are somewhat diverse, it is anticipated that noninstructional services (like assessment) will grow in diversity and volume. Several presidents interviewed indicated their colleges had yet to reach their potential in delivering customized noninstructional services.

Credit and Noncredit Ratio

The colleges were diverse in how they awarded college credits. It often depended on the employer need and the content of the course. It is anticipated that pattern will remain diverse and that it also will be influenced by state funding of FTE.

Location of Courses

Many assume that direct services means services are always delivered directly to businesses at their site. This was not found to be the case in this study. Some businesses came to the college 50% or more of the time, and in the other 50%, the colleges went to the business 50% or less of the time. It is anticipated the pattern will remain diverse because of the nature of customized training. This pattern further indicates that Colorado community colleges are accommodating business needs.

Matching Community Needs

The findings showed that the colleges are attempting to match their business communities' needs, but not to the complete satisfaction of their presidents (as found in presidential interviews). They suggest further potential growth and direction for the college. The targeting of specific industries (like manufacturing) for training or retraining was an emerging trend. While it may reduce the diversity of industries served, it makes economic sense to attract or retain those industries that employ workers in primary jobs. Primary jobs are defined as those that produce goods that are exported from the community or prevent the import of goods. The U.S. Chamber in 1984 estimated that one hundred primary jobs bring in approximately $1,000,000 to the community—$250,000 in car sales, $300,000 in groceries, and the rest in 40 to 60 additional jobs in the community. (Borgan and Shade, 1984).

Summary

Diversity in the delivery of customized instructional and noninstructional services is expensive because each delivery is customized. Nevertheless, this is highly desired and practiced in Colorado. However, if resources for business or education become scarce, the amount of customization may diminish, and the selection of sectors where the benefit will yield the most economic gain for the community will become important.

CONCLUSIONS: CONCENTRATION

Distribution of Direct Service

The findings suggest that a considerable amount of direct service was distributed among a majority of the colleges (8 of 15) where economic conditions were strong and there was a sizable population base. This is contrary to the patterns in other states like Maryland, where five of Maryland's 17 community colleges conducted the majority of direct service (Linthicum, 1985), or Kansas, where three colleges conducted 42% of the business (Gainus, 1987). The presidents in all 14 community colleges strongly supported this effort, which may account for the higher participation rate in direct service by Colorado community colleges.

Instructional Services

The highest volume of instructional services concentrated in eight colleges where economic conditions and population size were large. However, the pattern of concentration varied with the subject matter. The schools that delivered a large amount of vocational skill courses were not necessarily the same schools that delivered a large amount of basic skill classes. When all the courses were considered, the vocational skill courses represented the largest number of customized course offerings (51%). This is a lower percentage than the national findings of 62% (Lynch, 1990).

Noninstructional services

Noninstructional services, with one exception, did not concentrate at a few colleges, but spread evenly among the community colleges around the state. It can be concluded by examining the nature of the services (small business counseling and grantsmanship), that a large number of community colleges played a critical economic development role by assisting in the retention of business. These noninstructional services for economic development require the most customization because each individual business must receive counseling or grant preparation that is totally tailored to that business.

It is in the delivery of noninstructional services where the community colleges come closest to the county agent model which was developed by higher education in the 1880s to help the agricultural sector of the country. If the presidents' expressed desires (in interviews) for expansion of noninstructional services are realized, the community colleges will be expanding their customized county agent roles to help their local business sectors with economic development needs.

Dollar Size of Projects

Most colleges reported their largest amount of activity was for projects of $5,000 or less. The concentration of lower priced training may be attributed to the large number of smaller sized businesses served. It also may be attributed to the purchase of training in small increments on an as-needed basis by medium and larger businesses.

Size of the Businesses Served

The findings indicate that Colorado community colleges are playing a critical role in the state's economic development by concentrating customized training in the smaller sized firms (100-500) who have the least capacity to provide that training for their employees.

Financial Support for the Program

It can be concluded from these findings that while financial support is essential to the operation of a direct services program, it was not a determining factor in the success and continuation of the operation. A wide variation on the amount of financial support received by the direct services program was found, even among the eight most active and productive colleges.

Interviews with the presidents revealed that the direct services mission was a priority because it was so directly tied to the economic development of their communities. This was consistent with a national study where presidents indicated they would support the program financially even when it could not be self-supporting. Revenue generation was not found to be the major reason community colleges entered the direct services business (Warford, 1989).

The prevalence of strong support for this program by the Colorado presidents, both in words and deeds (finances), may explain why direct services did not concentrate at just a few colleges in the state but was found to be manifested in a majority (eight) of the colleges in the state.

Management Structure, Function and Experience

Factor

While structure and experience were not found to be determining factors in the eight most active colleges, the amount of time spent on marketing was thought to be a contributing factor in the eight most active colleges.

Nature of the Leadership and its Relationship to Direct Services Program

Leadership and support for direct services were found to be strong at all 14 colleges. However, the programs' strong relationship with the presidents may also make the direct services programs vulnerable whenever the leadership changes. The leaders were aware of this, and it explains why so many favored finding ways to integrate the mission and function of direct services to business into their institutions.

CONCLUSIONS: EXPANSION OF COMMUNITY SERVICE ROLE

It can be concluded that Colorado Community Colleges have expanded their roles by actively participating in their community's economic development. As this role expands and tests the limits of the mission of the college, it may cause more mission ambiguity. Mission ambiguity occurs when constituents within the institution may not understand or support new initiatives that expand the mission.

The main barrier that colleges in the study cited for lack of more activity was not the mission ambiguity but the economic conditions within their geographical area. As economic conditions such as layoffs or expansions continue to occur, community colleges speak of plans to take an even more active role. A further expansion of the role of community services in economic development can be anticipated. Palmer (1990) found, "the boundary between education and service in community leadership is not distinct" (p.9). If the trends manifested by this study continue to exhibit themselves, it may never be distinct.

CONCLUSIONS: COLORADO FIRST PROGRAM

While the Colorado FIRST and Existing Industry Programs did not account for a large amount of the customized training activity of the state (17%), the opportunities for lasting partnerships between the colleges and the businesses was invaluable. Their repeat business rates (61% and 90% respectively) are a testimonial to those partnerships.

CONCLUSIONS: BALANCING EDUCATIONAL DEMANDS OF BUSINESS WITH ACADEMIC TRADITIONS

The relationship between the businesses and the colleges in the name of customized training or direct services was found to be positive. The balance between the demands of business and academic traditions was found to be maintained through control of the curriculum and the assignment of faculty. Structure and operational policies (like pricing and project management) contributed to the maintenance of the colleges' control.

RECOMMENDATIONS

1. The Colorado Office of Economic Development needs to be able to characterize the extent and diversity of Colorado's direct services to business. It is recommended that a promotional piece be developed that would describe the instructional and noninstructional services available to new and existing business.

2. The availability of full and part-time faculty who have the specialized skills to train in business and industry was a concern expressed by several participants in the study. It is recommended that colleges design a program to train full and part-time faculty to deliver customized direct instructional and noninstructional services to business.

3. The colleges are uneven in their capacity to deliver the diverse range of training subjects that businesses around the state may request. It is recommended that colleges develop a system to catalog the training and service capability of each college with respect to subjects and expertise. This could help each college better represent the entire state's capacity to deliver direct services.

4. As the colleges expand their role externally, attention will need to be paid to how they accommodate the expanded role internally. It is recommended that the leadership make direct services priorities clear in mission statements and strategic plans as well as in the execution of those plans.

5. It is recommended that the mechanisms and incentives for awareness and/or participation in direct services by full-time faculty and staff be developed. This will facilitate the integration of direct services into the college.

6. It is recommended that the survey be administered periodically to keep the state abreast of changes in trends and service.

The direct services unit stands at the cutting edge with respect to the new knowledge and the trends it gathers from business and industry. Unfortunately, it still stands at the edge of some Colorado community colleges with respect to how it is perceived by the rest of the institution. To leave it at the periphery, without integrating it into the mainstream, would result in the college missing an opportunity to utilize all of the potential this initiative can bring to the entire college. If it is integrated more into the college it can play a catalyst role influencing the curriculum, staffing patterns, and teaching styles. In addition, it can be an important link to the potential jobs for traditional students.

The paradigm is shifting, and the boundaries between the college's old and new missions of educating the traditional student for the future and the existing employee for the present are converging. In the process, the institution may change and in some cases has done so already. The boundaries between the techniques for training the traditional student and a specific group of employees at a workplace may dissolve. Community colleges will begin to see their instructional roles as a continuum, with the traditional student on one end, and the business clients who contract for training their employees on the other. They will continue to be challenged to adapt to this continuum of learners. This study has confirmed that the colleges can adapt and respond to the changing needs of the communities they serve, and in the process they have changed themselves.

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STUDY OF DIRECT SERVICES TO BUSINESS BY COLORADO COMMUNITY COLLEGES
July 1, 1989 - June 30, 1990

- Colorado community colleges were found to customize their instructional and non-instructional services more than the national average.
- Direct services to business did not concentrate at just a few colleges. Eight of the 14 community colleges reported considerable activity.
- The eight colleges with the most activity tended to be located near the most populated areas and where the economic conditions were the most favorable.
- Leadership support by the presidents as measured by participation in economic activities and comments in the interviews was found to be strong in all fourteen community colleges.
- Financial support was not found to be a factor in concentration. All of the colleges supported direct services activity, and the amount of support was not correlated to the amount of activity in 1989-90.
- Active direct services programs had a variety of financing patterns. (Contracts, general fund and grants were major funding sources).
- Revenue generation from contracts with business accounted for 60% of the funding in at least half the colleges.
- Revenue generation was not found to be the primary reason colleges entered into direct services to business. Presidents interviewed felt these programs were a priority because they directly related to the economic development of their communities. This was consistent with national research (Warford, 1989).
- The largest percentage of customized courses delivered (50.6%) were for job specific vocational skills.
- Essential work skills accounted for 30% of the customized courses delivered, and two colleges dominated that delivery.
- Basic skills accounted for 8.4% of the the customized courses delivered and concentrated in three colleges.
- Counseling to small business accounted for the most services purchased by employers. Every college reported delivering this noninstructional service.

- Assessment of employees (e.g., basic skills) and assessment of business (e.g., organizational audits) tended to concentrate in two schools.

- Six of the 14 presidents interviewed expressed desire to expand the college's role in noninstructional services (e.g., counseling small business and assessment of minority business centers).

- Colleges were evenly split in their decisions about credit or noncredit for customized courses.

- In the majority of colleges (12) the college credit decision was a joint one shared by the direct services unit and regular instructional personnel who were content specialists.

- Regularly employed faculty teach a large proportion of customized classes and thereby help maintain control of the product (full-timers teach 43% of the customized classes, and regularly employed part-timers teach 25% of the customized classes).

- The customized curriculum was developed 80% of the time exclusively by the college. The rest of the time the employers collaborated with the college.

- Most (10 of 14) direct services units are led by a dean who reports to the president.

- Direct services to business was most frequently housed in the community service and/or continuing education department of the college.

- The average numbers of years of management experience by direct services leaders was 13.5 years

- The average number of years the direct services operations have been in existence in Colorado is 4.2 years.

- The centralized management model was the most common and accounted for the most representation among the most active colleges (7 of the 8).

- Direct services units spent the most time on project management (40-60%), instructional design (20% or more) and marketing (20-30% by 5 colleges who were among the most active).

- Customized training took place at the colleges as often as at the businesses, and there was no dominant pattern of location for training among the colleges.

- Colleges served the size and type of businesses reflected in the economic base of their communities, but not to the satisfaction of the majority of the presidents interviewed.

- There was a concentration of service to business in smaller sized businesses. (100-500 employees).
- There was a concentration in the manufacturing sector (7 of 9 colleges reporting concentrated 40% or more of their business here).
- Projects concentrated in the $5,000 or less category (50% of colleges reported 60% or more of programs delivered in this category).
- Colleges' pricing practices were similar. Only three considered indirect costs of phone, space or equipment lease.
- Repeat business for direct services was 89% (mean).
- Business growth for direct services was 189.9% (mean).
- State Economic Development Programs (Colorado FIRST and Existing Industry Grants) accounted for 17% of all employees who received customized training in the state in 1989-90.
- Only 7.8% of all employers who purchased customized training did so with the state's Colorado FIRST grant.
- Only 2% of all employers who purchased customized training did so with the state's Existing Industry grant.
- 61% of Colorado FIRST employers who were new to Colorado continued the training partnerships by purchasing more business the next year.
- 90% of the companies who received Existing Industry Training Dollars continued the training relationships by purchasing more business the next year.
- Constraints cited most often about the Colorado FIRST and Existing Industry programs were lack of adequate funding to accommodate more businesses, and inadequate funds to cover administrative costs. Short and long term relationships and exposure to new technologies were the benefits cited most.
- Findings showed Colorado community colleges are definitely expanding their missions to include a variety of economic development activities and roles that are beyond instruction. Serving on economic development planning teams rated high in importance.
- Activities such as business incubators that are seen by academicians as least central to the college's mission were rated lowest in importance and amount of activity by the college direct services officers.

- The direct services mission was highly valued by all the presidents; the direct services mission was not explicit in five of the colleges' mission statements and four of the colleges' strategic plans.

- The presidents expressed concern about roadblocks to acceptance of the direct services mission by some of their full-time faculty and middle management, and sometimes the facilities and business offices. All expressed desire to integrate the direct services mission into their institutions.

- The Presidents viewed their roles in economic development as situational—leader, catalyst, prime mover and/or partner, depending on the situation.

Table 1

Distribution of Direct Instructional Services

July 1, 1989 - June 30, 1990

Type of Courses	Number of Colleges	Number of Courses and Percentage	Number of Employers and Percentage	Number of Employees and Percentage
Vocational Skills	12	410 (50.6%)	271 (57.4%)	11,697 (71.2%)
Basic Academic Skills	8	67 (8.4%)	53 (11.2)	1,116 (6.89)
Essential Work Skills	9	244 (30%)	116 (24.6)	2,587 (15.7%)
Other Courses	6	90 (11%)	32 (6.8%)	1,036 (6.3%)
Total		811	472	16,436*

*Average employees per college is: 1,174

Table 2

Distribution of Direct Noninstructional Services

July 1, 1989 - June 30, 1990.

Type of Service	Number of Colleges	Number of Employers	Number of Employees
Preemployment Assessment	6	20	912
Employee Assessments	7	54	1,452
Company Assessments	8	82	948
Industry Specific Research	2	45	120
Grantsmanship	10	57	2,344
Procurement Assistance	2	193	-
Counseling for Small Business	10	1,181	2,813
Total		1,632	8,589

Table 3

Dollar Size of Direct Services Projects

During July 1, 1989 - June 30, 1990

Dollar Size of Projects	Number of Colleges	Percentage of Business				
		0 - 20%	20 - 40	40 - 60	60 - 80	80 -100
Under $5,000	10	2	1	-	2	5
5,000-10,000	4	4	-	-	-	-
10,000-25,000	5	3	1	-	1	-
Over 25,000	7	-	2	1	1	3

Table 4

Percentage of Direct Services by Industry Type

Type of Industries	Number of Colleges	Percentage of College Service				
		0 - 20	20 - 40	40-60	60 - 80	80 - 100
Service	10	1	6	2	1	-
Manufac-turing	9	1	1	2	2	3
Local/State Gov't.	8	2	3	1	-	-
Retail	4	1	2	1	-	-
Military	2	1	-	-	-	1
Other	2	1	1	-	-	-

Table 5

Percentage of Service by Size of Company

Size of Company by Number Employees	Number of Colleges	Percentage of Service				
		0 -20	20 - 40	40 - 60	60 - 80	80 - 100
10 or fewer employees	6	1	-	1	-	4
100 - 500	9	1	3	3	1	1
500 - 1,000	6	5	1	-	-	-
1,000 - 5,000	3	1	1	1	-	-
5,000 - 10,000	3	-	-	-	2	-
Over 10,000	0	-	-	-	-	-

Table 6

Percentage of Funding Received by Type of Funding Sources

Type of Funds	Number of Colleges	Percentage of Funding				
		0 - 20	20 - 40	40 - 60	60 - 80	80 - 100
Grants	7	4	2	-	-	1
General Fund	9	3	1	1	2	2
Direct Services Contracts	12	3	1	1	11	5

Table 7

Activity Levels and Importance of Colorado Community Colleges' Participation in Economic Development Activities

	No. of Colleges	Percentage: Not Very Active 1	2	3	4	Very Active 5	Percentage: Not Very Important 1	2	3	4	Very Important 5
a. Serve on economic development planning team	14	-	-	14	29	57	-	-	14	21	64
b. Participate in recruiting new business	14	-	29	21	29	21	-	-	7	64	29
c. Participate in Chamber of Commerce	14	-	7	-	14	79	-	-	7	36	57
d. Serve on private industry council	13	-	-	7	57	36	-	-	7	50	36
e. Interact with local government representatives	13	-	-	7	50	36	-	-	14	43	36
f. Interact with state government representatives	14	-	-	21	43	36	-	-	7	50	43
g. Interact with business/professional organizations, labor unions, or industry boards	14	-	-	29	29	43	-	-	7	50	43
h. Belong to service club (Lions, Rotary, etc.)	14	-	-	21	36	43	-	-	-	42	57
i. Provide services through the Small Business Development Center											
1. counseling for start-up	14	-	21	14	14	50	-	-	29	43	43
2. assistance with financing	14	-	7	36	21	36	7	36	29	29	14
3. business incubators	14	-	43	29	14	14	7	21	29	29	2
4. provide contract procurement assistance	13	36	29	14	7	7	-	29	14	29	21
5. education: programs/ seminars/workshops	14	-	14	7	29	50	-	-	7	36	57

Number of Employers, Employees Participating in 1989-90 Colorado FIRST & Existing Industry Training Program

Program	Number of Colleges Participating	Number of Companies/ Employers Receiving Funds	Number of Employees Trained
Colorado FIRST Dollars	10	37	2,797
Colorado Existing Industry	6	16	871

Table 9

Percentage of Participation by Colleges.

Companies in the Design & Execution of Training

	Number of Colleges	Mean % of Training Conducted by Company	Mean % of Training Conducted by College	Mean % of Training Conducted by Both	Mean % of Companies Who Continued Training Relationship After June 30, 1990
Colorado FIRST Program	7	72.2 (n=5)	84.4 (n=7)	81.2 (n=4)	61.6 (n=76)
Existing Industry	6	50 (n=3)	90 (n=1)	100 (n=2)	90 (n=6)

n = number of colleges

Table 10

Percentage of Curriculum Developed by the College, Business or Both

	Number of Colleges	Mean %	Percentage of Curriculum 0 - 20%	20 - 40%	40 - 60%	60 - 80%	80 - 100%
Developed Solely by College	12	69	2	1	1	-	8
Developed Solely by Employers	7	22	5	-	2	-	-
Developed Cooperatively by Employer & the College	11	35	5	2	2	-	-

Table 11

Percentage of Courses Taught by Categories of Instructors

Categories of Instructors	Number of Colleges	Mean %	Percentages of Courses Taught 0 - 20%	20 - 40%	40 - 60%	60 - 80%	80 - 100%
Full-Time Instructors	12	43	4	2	3	2	1
Part-Time Instructors (of Regular College)	10	25	6	3	0	1	0
Customized Training Temporary Faculty	7	25	5	1	-	-	1
Employees of the Company	7	24	5	1	-	-	1
Consultants	8	31	3	3	0	1	1

FIGURE 1

Percentage of training delivered by business and industry training, and percentage of training conducted by providers outside of business and industry

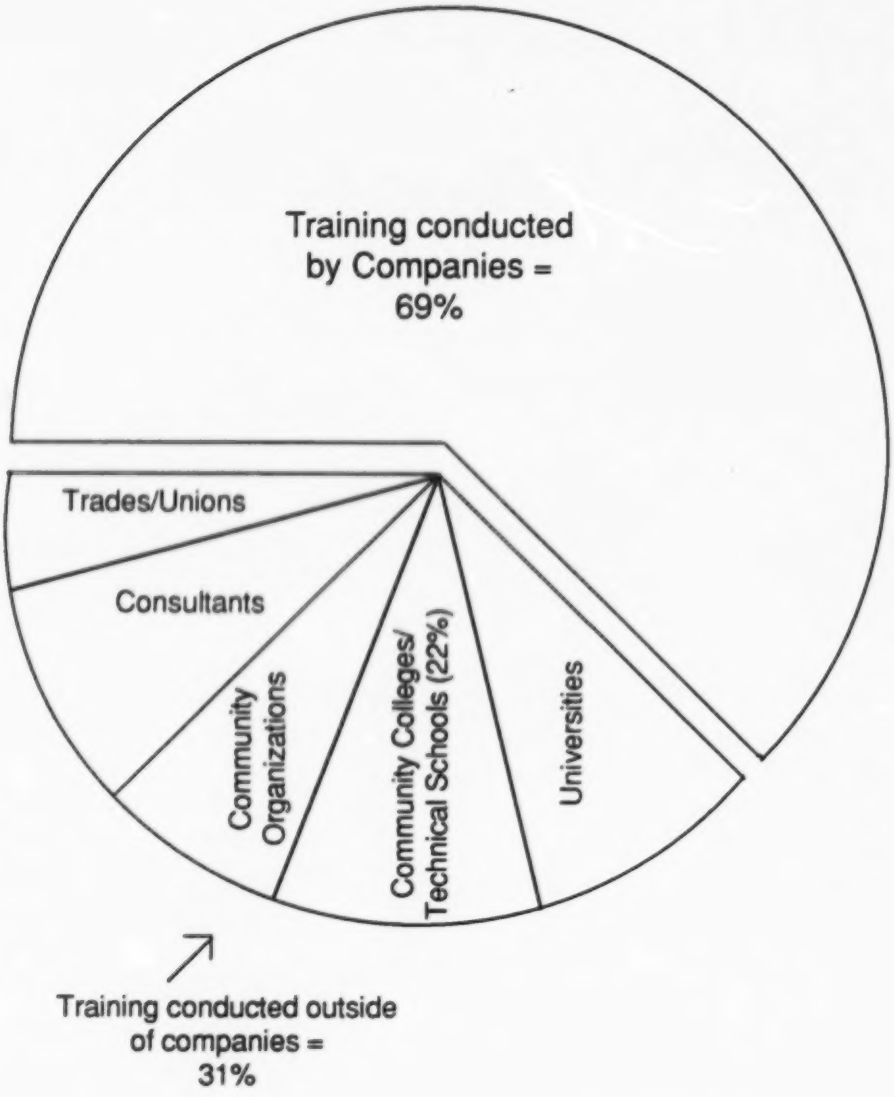
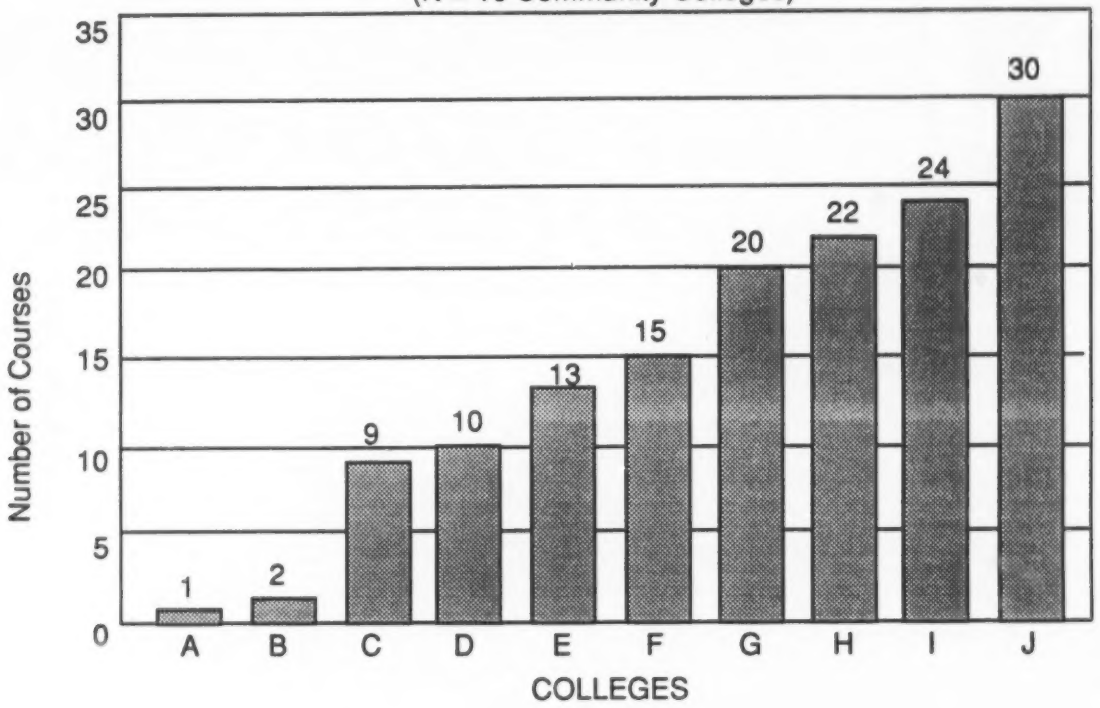


FIGURE 2

Volume: No. of Job-Specific Vocational CoursesTaken by Employees
(N = 10 Community Colleges)



Volume: No. of Employees Taking Job-Specific Vocational Courses
(N = 10 Community Colleges)

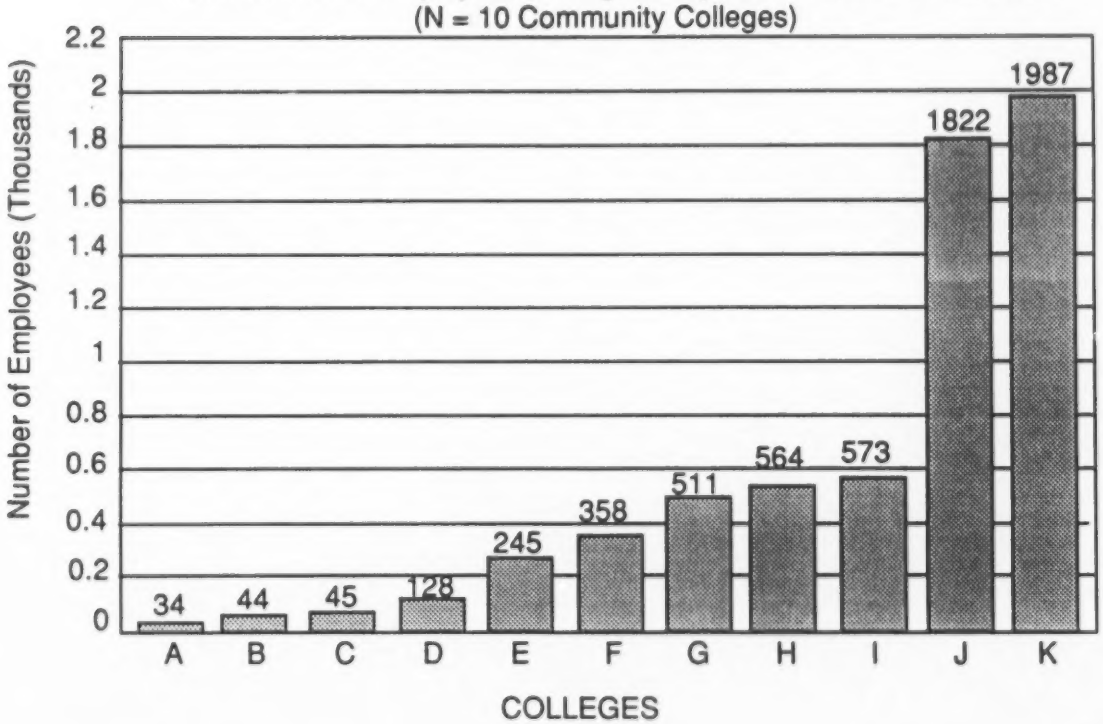
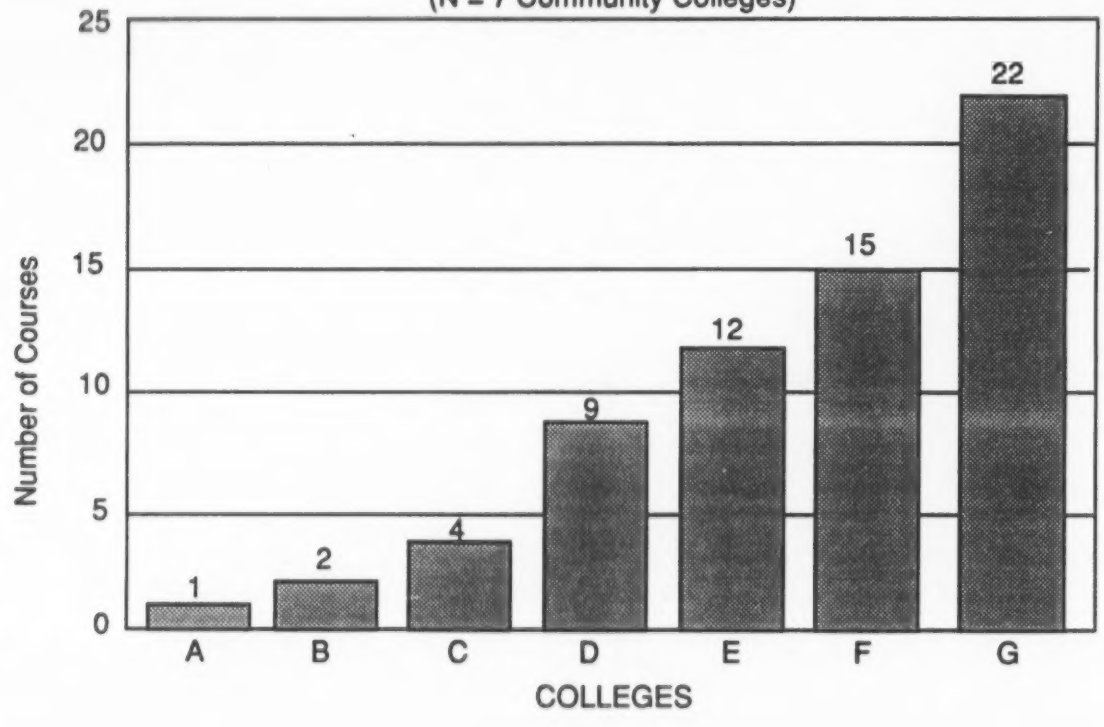


FIGURE 3

Volume: No. of Job-Specific Academic Courses Taken by Employees
(N = 7 Community Colleges)



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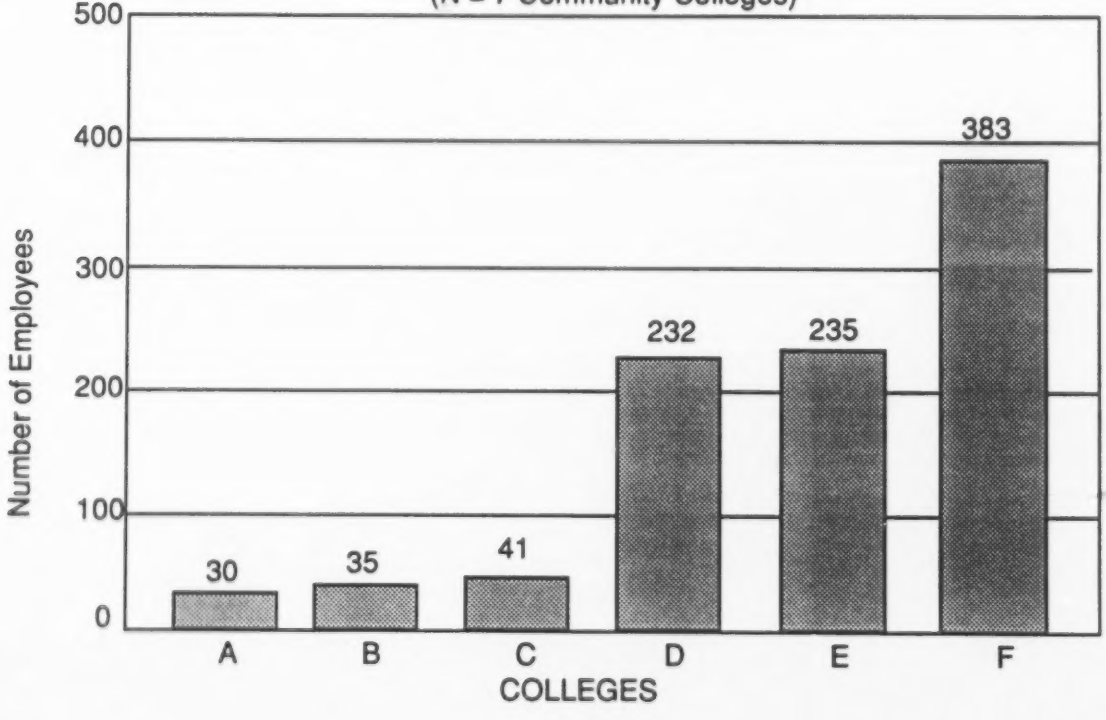

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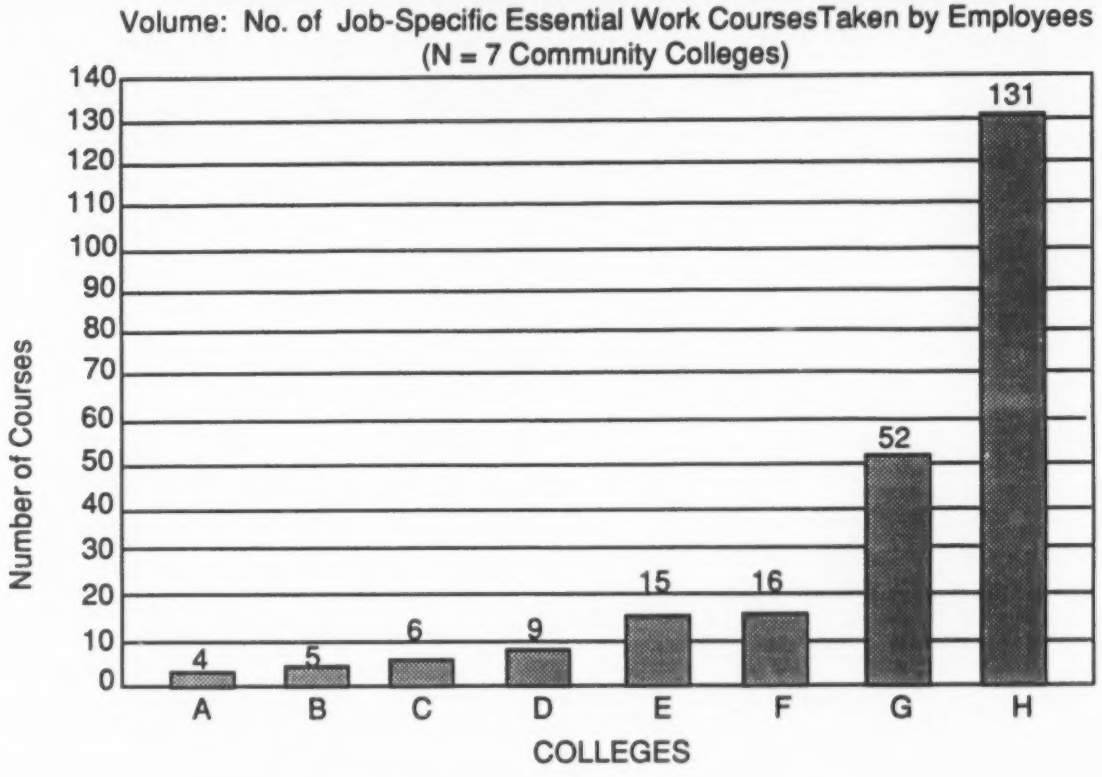
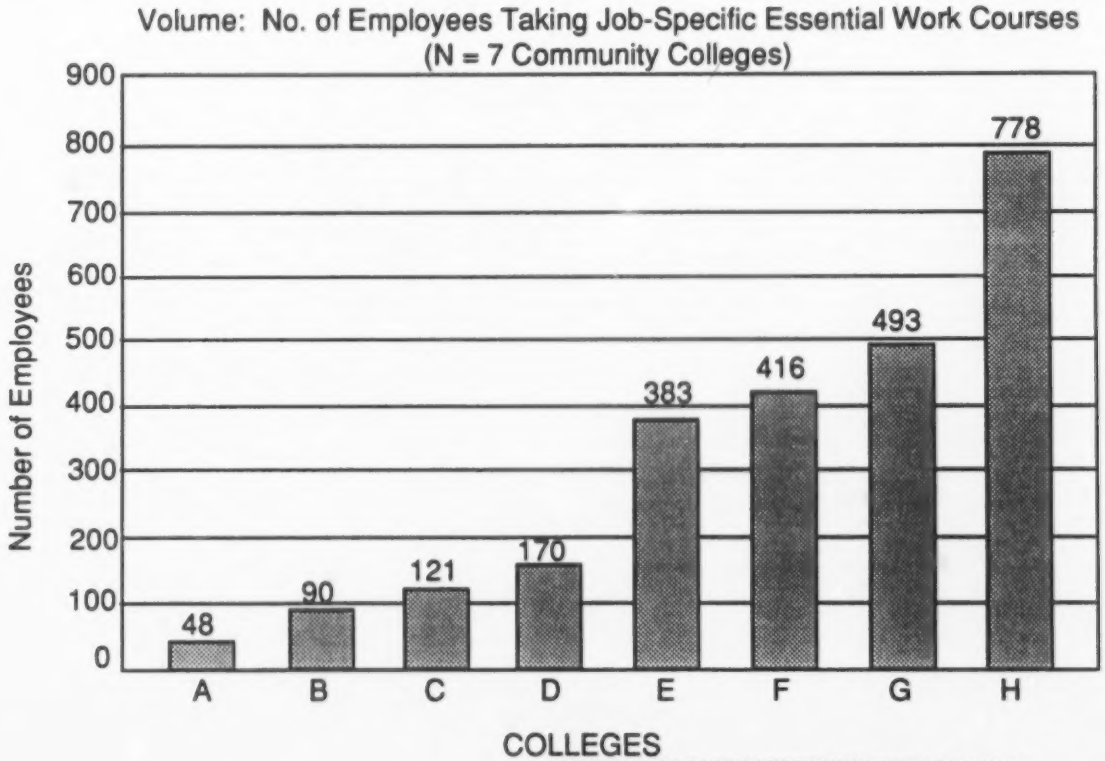
FIGURE 4





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